FY 2004-2005 Monthly Educational Seminars

Objective: to provide a forum for agencies who are actively involved in national and local information exchange on perspectives and issues focusing on USACE water resource projects. Seminars are held on Tuesday, from 2:00 pm to 3:00 pm., at the Pacific Regional Visitor Center (RVC).

Directions: The RVC is located at Fort DeRussy. See attached map and directions.

Who should attend? Federal, state, and local agency personnel, water resource engineers, water resource managers, environmental consultants, environmental policy managers, ecological scientists and researchers, and hydrological modelers. Participants will interact in an informal setting to review and summarize water resources research, planning and management activities.

For more information contact Iwalani Sato, Pacific Regional Visitor Center, Civil Works Technical Branch, Engineering and Construction Division, Honolulu Engineer District, at 429-4112 or go to http://www.poh.usace.army.mil/index.asp.

Seminar Topic	Date	Agency	Guest Speaker
Watershed Restoration	14 Sep 2004	USACE, Civil Works	Derek Chow Dudley Kubo
Coastal Priorities	5 Oct 2004	USACE, Civil Works State of Hawaii DLNR UH Sea Grant Program	Tom Smith Sam Lemmo Dolan Eversole
Flooding: Hydrology and Ecology	16 Nov 2004	USACE, Civil Works State of Hawaii DLNR	Jim Pennaz Sterling Yong
Interagency Collaboration in the Pacific: Case Study at USAKA	11 Jan 2005	SMDC, USFWS, USACE, EPA, NOAA National Marine Fisheries, Republic of Marshall Islands (RMI)	Randy Gallien Michael Molina Helene Takemoto John McCarroll Jim Naughton Representative RMI
Wildlife in the Pacific	8 Feb 2005	USFWS, DLNR-DOFAW, AUDOBAN, NOAA Humpback Whale Sanctuary	Barbara Maxfiled, David Smith, Lance LaPierre, Chris Brammer
Groundwater Infiltration, Reuse of Water	8 Mar 2005	USGS, HBWS, UH Engineering, Civil	Steve Anthony, Barry Usagawa, Roger Babcock
Watershed Approaches to Stormwater Management	5 Apr 2005	City and County of Honolulu, State of Hawaii DOH (regulatory), UH-SOEST Water Quality and Research, UH-CTAHR (Water, Agriculture)	Gerald Takayesu Randall Wakumoto Watson Okubo Eric DeCarlo Carl Evensen
Living Reefs	8 Jun 2005	State of Hawaii Division of Aquatic Resources, University of Hawaii at Manoa, NOAA, Others To Be Announced	Atheline Clark Melissa Bos, Tony Antonelis Others To Be Announced
United Command System	12 Jul 2005	USACE, EMD; FEMA, State of Hawaii Civil Defense, NOAA-NWS	Joe Hendrix Willie Goins, Jr. Ed Texeira Jim Weyman
ERDC Special Topics	2 Aug 2005	USACE, ERDC	Stan Boc

PACIFIC REGIONAL VISITOR CENTER

Other sites in the area: U.S. Army Museum, Hale Koa Hotel, Fort DeRussy Beach

U.S. Army Corps of Engineers

Water Resources Planning and Education

TEACHER'S GUIDE

PACIFIC REGIONAL VISITOR CENTER IN WAIKĪKĪ
Corner of Saratoga and Kalia roads
2nd Floor above the U.S. Army Museum
Fort DeRussy Armed Forces Recreation Area
Honolulu, HI 96815

(808) 438-2815 prerecorded message
(808) 429-4112 programs and tours
Email: iwalanisato@hawaii.rr.com

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Outreach

Young Engineers & Scientist Program—Hands On Lab

One of our newest and most innovative resources is a place for teachers and students to learn about the importance of our watershed and what we can do to take care of it. This is a hands-on lab where you can do water quality analysis, GIS mapping, multi-media presentations, and more. Call for more information about this latest addition to the visitor center education program.

"Outreach activities are communication and education efforts using interpretive techniques to reach diverse populations such as students, teachers, organized groups such as Boy Scouts, Girl Counts, 4-H, and the general public beyond the boundaries of Corps projects. In addition to interpreting the Corps story, outreach activities encourage students to pursue career opportunities in mathematics and science oriented field and to become environmentally astute adults."

Outreach Activities

National Public Lands Day—Third Saturday in September
Coastal Clean-Up Partnering with the State of Hawaii Department of Health (DOH)

World Water Monitoring day—Third Friday in October
Predict and measure water quality parameters in partnership with DOH and City and County of Honolulu Environmental Services, and Hawaii Nature Center

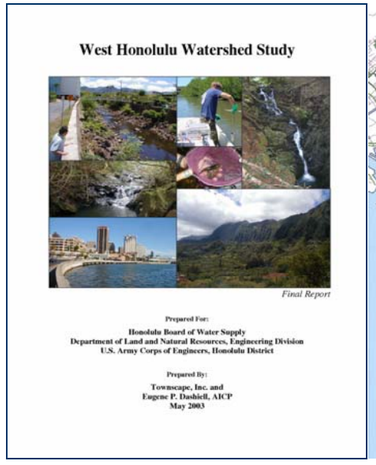
Earth Day—April
Learn more about restoration projects in the watershed, including conservation efforts using native species and xeriscaping at Fort DeRussy Recreation Area in partnership with the Hale Koa Hotel.

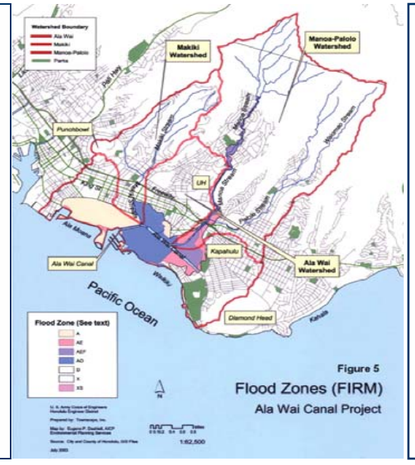
Docent Program

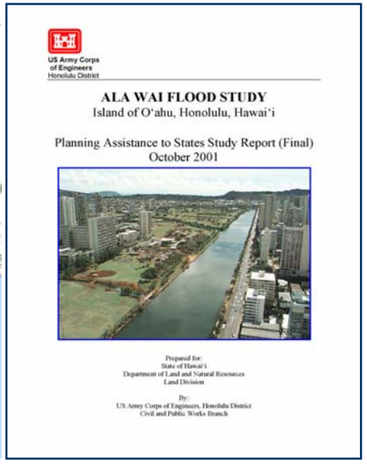
Twelve-hour docent training to prepare volunteers to work with visitors at the Pacific Regional Visitor Center. Learn about the Corps' mission from the national to the local level, the purpose of local projects, geography, hydrology, ecology, conservation and stewardship, endangered species and migratory birds, and historic conditions.

Resources

http://www.poh.usace.army.mil/CW/civilworks.html
http://www.orn.usace.army.mil/volunteer/







Interpretative Services

What is interpretation?

The U.S. Army Corps of Engineers defines "interpretation" in Engineer Regulation 1130-2-428, Interpretive Services and Outreach Program, as:

"Interpretive serves are communication and education processes provided to internal and external audiences which support the accomplishment of Corps missions, tell the Corps story and reveal the meanings of and relationships between natural, cultural, and created environments and their features."

We can customize the program to any watershed near your school. Current programs are:

Grades 4-6

Our lower grade program focuses on U.S. Army Corps of Engineers projects at Kawai Nui Marsh. Students first observe a video on flood control and wetland preservation. After the video, students go on a guided excursion through the visitor center.

To prepare students discuss:
· Hydrology, natural and cultural resources in the wetland
· Names for different wetlands
· The value of wetlands and environmental stewardship

Grades 7 and Up

This program focuses on U.S. Army Corps of Engineers flood control and ecosystem restoration projects in the Kaneohe-Kailua and Ala Wai watershed. Students first observe a video on flood control and wetland preservation. After the video, students go on a guided excursion through the visitor center and the grounds of the Hale Koa Hotel.

To prepare students discuss:
· Historic conditions, current issues and future possibilities in an urban watershed
· Flood alternatives
· Visual assessment of the watershed
· Predict & collect water quality measurements and environmental stewardship

Kaneohe-Kailua Flood Control Project, Kaneohe, O`ahu. *Local Sponsor: City and County of Honolulu. The first dam and one of the largest civil works flood control projects constructed by the Corps. A multi-purpose project including fish and wildlife and recreational features, the completed flood control project and Ho'omaluhia Recreation Area were dedicated in 1980.*

Ala Wai Watershed Project, Honolulu, O`ahu.
Local Sponsor: State of Hawai`i Department of Land and Natural Resources. Utilizes a watershed-based approach to consider all factors related to a particular system so that improvement efforts are complementary and not conflicting. The context used to frame this "holistic" investigation of the Ala Wai watershed is what is known as the "ahupua`a concept." This traditional Hawaiian concept of land management generally follows the conventional watershed delineation as a starting point, and expands to the offshore waters and the outer reefs as part of the watershed system. The ahupua`a system accounts for the influence of man as a major component of the greater watershed system.

Welcome

What is the Pacific Regional Visitor Center (RVC)?

The primary purpose of the RVC program is to provide interpretive services and outreach education to the visiting public about the story of the U.S. Army Corps of Engineers (Corps). In legislation spanning over a century, Congress has authorized the Corps to regulate and protect U.S. waters.

Exhibits, interpretive services and outreach education are designed to stimulate interest and convey information on water resources planning and environmental stewardship. Planning calls for a holistic watershed approach and integrates the ahupua`a concept, historic conditions, current issues and future possibilities with our partners to create a sustainable future.

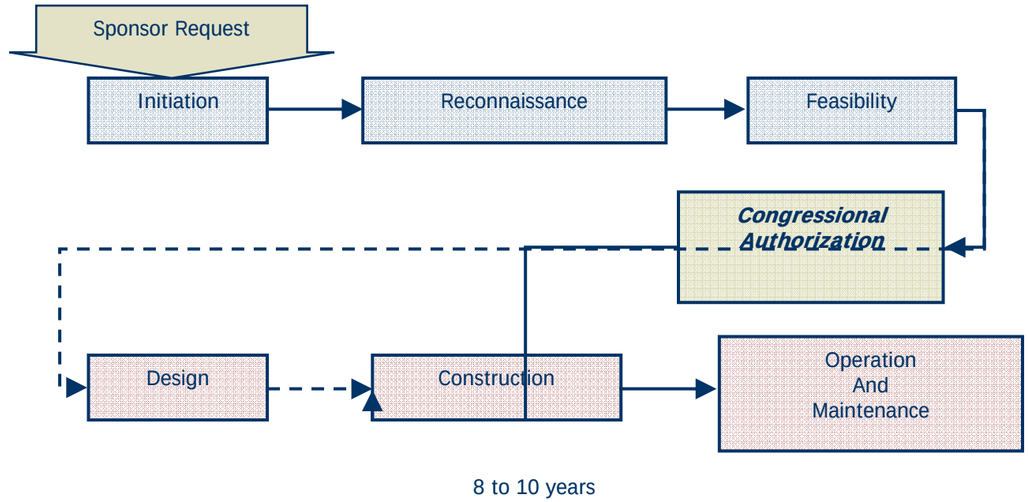
Projects comply with Federal, state and local environmental laws and requirements, restore project sites, reduce flooding, prevent environmental impacts such as pollution and habitat destruction, and conserve and protect the long-term availability of natural and cultural resources at project sites.

Who is the Army Corps of Engineers?

We are a federal agency that provides engineering services to the nation. The process for developing Civil Works or water resource projects begins when citizens see a need for flood protection or other water-related need and ask Congress for help.

Congress will direct the Corps to do a study to see if a project is warranted. Corps studies are usually done in 2 phases: an initial reconnaissance to determine if a feasible solution is likely, then a feasibility study to examine alternatives and select the project that best meets national and local needs. If the conclusion is positive, before any construction, Congress must first authorize the project and then appropriate funds. Most projects are built with Federal funds and contributions from non-federal sponsors. Depending on project purpose, the Corps then either operates and maintains the completed project, or turns it over to local authorities.

SPECIFICALLY AUTHORIZED PROCESS



Field Trip Guidelines

Reservations – Please call (808) 428-8866 or 429-4112 between 8:00 am and 4:00 pm to reserve programs (at least three weeks in advance).

Grade range – 4 through 12

Group size – 10 to 50 children

Chaperone requirements - 1 adult per 5 children

Program times – 10:00 am and 1:00 pm

Program length – Approximately 60 minutes

Accessibility – The visitor center is wheelchair accessible. Bus drop-off area directly in front of the Pacific Regional Visitor Center. See attached map and directions.

Nametags – Please have students make nametags to wear during their visit.

Do's and Don'ts –

Please do:

- ☐ Allow extra driving time, as Waikīkī area traffic is unpredictable (arrivals later that 30 minutes, after their scheduled time, may be cancelled).
- ☐ Allow time for children to use restroom facilities upon your arrival.
- ☐ Advise chaperones of their duties: keeping the group together, and maintaining order at all times.
- ☐ Encourage students to respect others by raising hands for questions or comments.
- ☐ Call the visitor center immediately to cancel or reschedule.

Please do not:

- ☐ Allow eating or drinking inside the visitor center.
- ☐ Allow running inside the visitor center.

Before your visit:

- ☐ Familiarize your students with a map of the watershed and in relation to your school.
- ☐ Discuss concepts such as the water cycle and watershed, ahupua`a or traditional land management units and principles, surface water features such as streams, and flood zones.
- ☐ Examine current water- related issues. (Middle and High School ages)
- ☐ Examine future possibilities involving water- related issues. (Middle and High School ages)
- ☐ Talk about the uses of water and the importance of water quality for human, agricultural, and environmental uses.

During your visit (before or after your program):

- ☐ Have students visit the visitor center, and write down one item to share with the class on a later day.

Review for School Groups

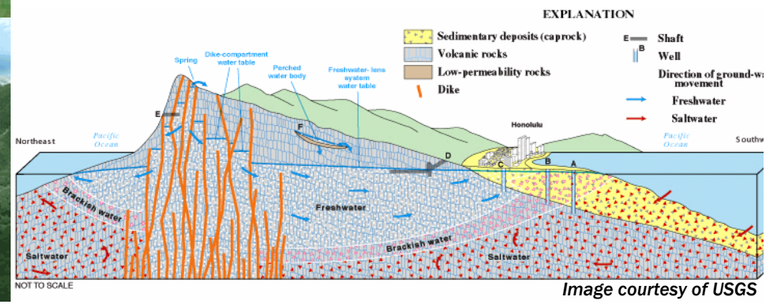


Image courtesy of USGS

What is a watershed?

A watershed is area of land that catches rain and drains or seeps into groundwater or a marsh, river, or stream (surface water). You are in a watershed right now. The visitor center is located on Fort DeRussy Beach, on the south coast of the island of O`ahu, in Waikiki, . Waikīkī remains the main collection area of the Ala Wai watershed, with drainage to the sea at the Ala Wai Boat Harbor (middle right). Beyond is Kewalo Basin. *Where are your watershed boundaries?*

Ahupua`a: traditional land management units from the mountains to the sea

Watershed planning in Hawai`i has focused on the ahupua`a or traditional land management units that typically ran between valley ridges from the mountain top to the ocean, including the reef beyond. There is an inherent interconnectedness between land use and natural resources that may be exemplified by the effect that upstream actions, such as erosion or pollution, have on downstream waters. Therefore, this exhibit includes the entire watershed, as the unit of study.

Some ahupua`a principles that may be transferred to watershed planning include access to a complete resource base, reverence for water, respect for all living things, coordination and cooperation, respect, intergenerational learning, ohana among people, and the connection between the people and the land.

Water Basics

The island of Oahu receives approximately 2 billion gallons of rain per year according to the Honolulu Board of Water Supply. About 92% of O`ahu's fresh water comes from underground aquifers fed by rainfall along the Ko`olau and Wai`anae ranges. Surface water features, such as *Makiki, Mānoa, Pālolo* streams, and underground water features have had notable impact on Hawaiian folklore and relatively recent development. The natural drainage patterns in this watershed were severely altered by storm drains emptying into existing streams and estuaries such as the Ala Wai Canal. Erosion and sedimentation from the upper watershed greatly impacts the carrying capacity of the Canal. Flooding in this watershed is typically caused by inadequate capacity of natural streambeds to accommodate flood flows, restrictive bridge openings, and previous constructed channels that were not designed to accommodate current standards. Previous flood control projects allowed for development within the 100-year flood zone. The phase "100-year flood" has caused much confusion over the years. Many mistakenly believe that it is a flood that occurs every 100 years. However, the phrase means a flood has a 1 percent chance of occurring in any given year. Floods are classified accordingly to their frequency and depth. A 100-year flood, although less frequent than a 10-year flood, is deeper-and far more destructive. For this reason, the 100-year flood is now more commonly called the "base flood". *Are you in a flood zone? Near a stream?*

Partnering In The Pacific

Our long history of partnering in the Pacific with local, state, and federal agencies have resulted in significant contributions in water resource management, involving flood control, navigation, wetlands preservation, aquatic plant control, and watershed planning. For example, several agencies at all levels of government are involved in flood control and ecosystem restoration such as storm water modifications designed to accommodate aquatic and riparian habitat, maintenance issues, and recreational use where appropriate. Another important aspect is the citizenry that takes an active role as a stakeholder in the watershed. There is an increasing trend for volunteer groups from the immediate or general region to get actively involved in the improvement of the physical surrounding and water resources that they depend upon for survival. The roles of community groups and partnerships are key components in watershed restoration and improvement.